



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/567,424

12/09/2008

John Charles Mulley

1386/23

4429

25297 7590 10/13/2010  
JENKINS, WILSON, TAYLOR & HUNT, P. A.  
3100 Tower Blvd.  
Suite 1200  
DURHAM, NC 27707

EXAMINER

KOLKER, DANIEL E

ART UNIT

PAPER NUMBER

1649

MAIL DATE

DELIVERY MODE

10/13/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/567,424	MULLEY ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Daniel E. Kolker	1649	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 8-18,30-37 and 86 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 8-18,30-37,86 are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

Art Unit: 1649

### **DETAILED ACTION**

1. The preliminary amendment filed 6 February 2006 has been entered. Claims 8-18, 30-37, and 86 are pending and subject to the restriction requirement below.

### ***Election/Restrictions***

2. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group 1, claim(s) 8-16, 30-37, and 86, each in part, drawn to variants of SCN1A channels and nucleic acids encoding same.

Group 2, claim(s) 8-16, 30-37, and 86, each in part, drawn to variants of SCN1B channels and nucleic acids encoding same.

Group 3, claim(s) 8-16, 30-37, and 86, each in part, drawn to variants of SCN2A channels and nucleic acids encoding same.

Group 4, claim(s) 8-16, 30-37, and 86, each in part, drawn to variants of CHRNA5 channels and nucleic acids encoding same.

Group 5, claim(s) 8-16, 30-37, and 86, each in part, drawn to variants of CHRNA2 channels and nucleic acids encoding same.

Group 6, claim(s) 8-16, 30-37, and 86, each in part, drawn to variants of CHRNA3 channels and nucleic acids encoding same.

Group 7, claim(s) 8-16, 30-37, and 86, each in part, and 17-18 in their entirety, drawn to variants of KCNQ2 channels and nucleic acids encoding same.

Group 8, claim(s) 8-16, 30-37, and 86, each in part, drawn to variants of KCNQ3 channels and nucleic acids encoding same.

Group 9, claim(s) 8-16, 30-37, and 86, each in part, drawn to variants of GABRB1 channels and nucleic acids encoding same.

Group 10, claim(s) 8-16, 30-37, and 86, each in part, drawn to variants of GABRG3 channels and nucleic acids encoding same.

Group 11, claim(s) 8-16, 30-37, and 86, each in part, drawn to variants of GABRA1 channels and nucleic acids encoding same.

Art Unit: 1649

Group 12, claim(s) 8-16, 30-37, and 86, each in part, drawn to variants of GABRA2 channels and nucleic acids encoding same.

Group 13, claim(s) 8-16, 30-37, and 86, each in part, drawn to variants of GABRA5 channels and nucleic acids encoding same.

Group 14, claim(s) 8-16, 30-37, and 86, each in part, drawn to variants of GABRB2 channels and nucleic acids encoding same.

Group 15, claim(s) 8-16, 30-37, and 86, each in part, drawn to variants of GABRPi channels and nucleic acids encoding same.

Group 16, claim(s) 8-16, 30-37, and 86, each in part, drawn to variants of GABRB3 channels and nucleic acids encoding same.

Group 17, claim(s) 8-16, 30-37, and 86, each in part, drawn to variants of GABRD channels and nucleic acids encoding same.

3. The groups of inventions listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

Each of the inventions set forth above corresponds to mutations in a different protein (or nucleic acid encoding such a protein). The special technical feature of each group is a variation in each of the proteins. That is, the special technical feature of Group 1 is variants in SCN1A channels, the special technical feature of Group 2 is variants in SCN1B channels, and so on. The technical features of each group are mutually exclusive and thus unity of invention is lacking.

Note that once a single protein (i.e., any one of groups 1-17 set forth above) is elected, claims which encompass the nucleic acid, vector, host cell, method of preparing a polypeptide, and polypeptides will be examined. **In order to expedite prosecution applicant is requested to point out which of the 72 SEQ ID NOs as in claims 9-10 and 15-16 corresponds to the elected invention.**

4. Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in

Art Unit: 1649

the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected invention or species.

Should applicant traverse on the ground that the inventions have unity of invention (37 CFR 1.475(a)), applicant must provide reasons in support thereof. Applicant may submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. Where such evidence or admission is provided by applicant, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel E. Kolker whose telephone number is (571)272-3181. The examiner can normally be reached on Mon - Fri 8:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Stucker can be reached on (571) 272-0911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/567,424

Page 5

Art Unit: 1649

/Daniel E Kolker/

Primary Examiner, Art Unit 1649

October 5, 2010